www.Kama-Labs.com

Wi-Fi **Marusya** v5

(Assembly instructions and latest firmware you can find on my website)

Made my own hands ☺

Thanks for purchase!!!

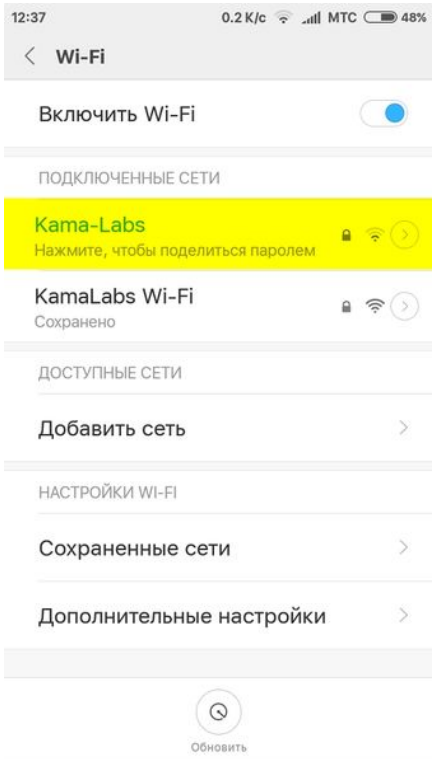
Features:

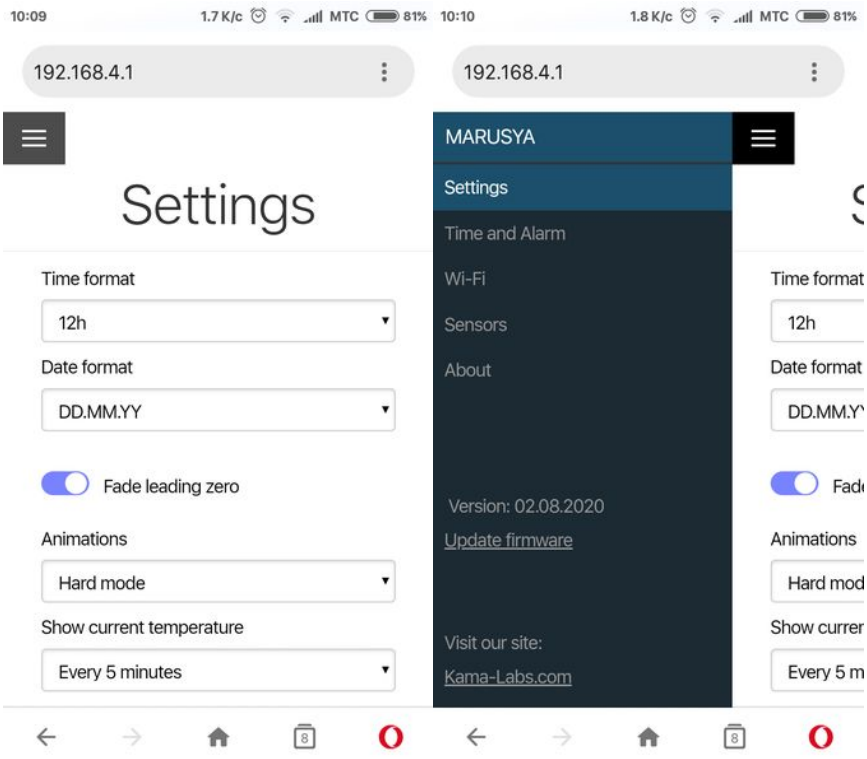
* 16x Soviet IV-26 VFD tubes (made in 1989)
* 2x Soviet IV-12 VFD tubes (made in 1986)
* Full remote control
* Full control of clock via Wi-Fi
* 32bit ESP32 processor
* 12/24h time mode
* Fade leading zero
* Wi-Fi connection to PC or smartphone
* Synchronizing time and date from NTP server
* Over-the-air firmware update
* Programmable scrolling line
* High-precision onboard time chip DS3231
* Unique high effective smooth routing of PCB
* 1 Alarm
* IV-26 and IV-12 tubes work in static mode
* Double Multicolour adjustable LED backlight
* Automatic change color mode for top and bottom backlights
* Temperature / humidity / pressure sensor
* Automatic brightness of tubes using light-sensor
* 8 animations for digits
* Binary clock* Off clock at night by schedule

* Temperature C° or F°
* Correction of temperature
* Accurate to +/- 1 minute/year
* Date in format DD.MM.YY or MM.DD.YY or YY.DD.MM
* Backup battery. Data is no lost when power off
* Power source - DC 12V barrel plug 5.5mm/2.1mm ("+" inside, "-" outside)
* Consuming current - 800mA
* Noiseless work
* Dimensions of the clock in case - 322mm(W) x 88mm(L) x 135mm(H)
* Dimensions of the clock – 288mm(W) x 52mm(L) x 130mm(H)

How connect to Marusya clock via Wi-Fi:

1) Turn on clock.
2) Connect to “Kama-Labs” Wi-Fi network via your smartphone or PC. Password: nixieclock
3) Open browser and go to “marusya.local” or 192.168.4.1 or scan QR-code.
4) You will see page with all setting of Marusya clock.





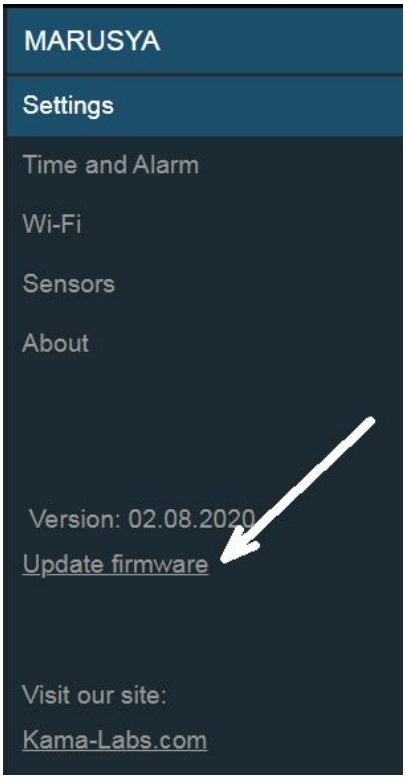
Connecting to home Wi-Fi network:

Marusya clock can connect to your home Wi-Fi network and synchronize time from NTP server. Also you will have access to clock from any device connected.

1) Go to “Wi-Fi” in menu
2) Fill fields “Name of Wi-Fi network” and “Password of Wi-Fi network” of your Wi-Fi network
3) In “Wi-Fi mode” choose “Internet connection”
4) Set your Time Zone
5) Reset the clock or wait 5 minutes until clock will connect to your home network

At now clock will connected to your Wi-Fi network. If you will press “0” key on remote control clock will show status and IP-address.

Led on back side of clock will not blink when clock connected to your home network.



How to update firmware:

1) Go to https://kama-labs.com/manuals_and_firmwares and check for new firmware version. Current version you can see here:
2) Click “Update firmware” link
3) Choose file with firmware
4) Click “Update”. Done!

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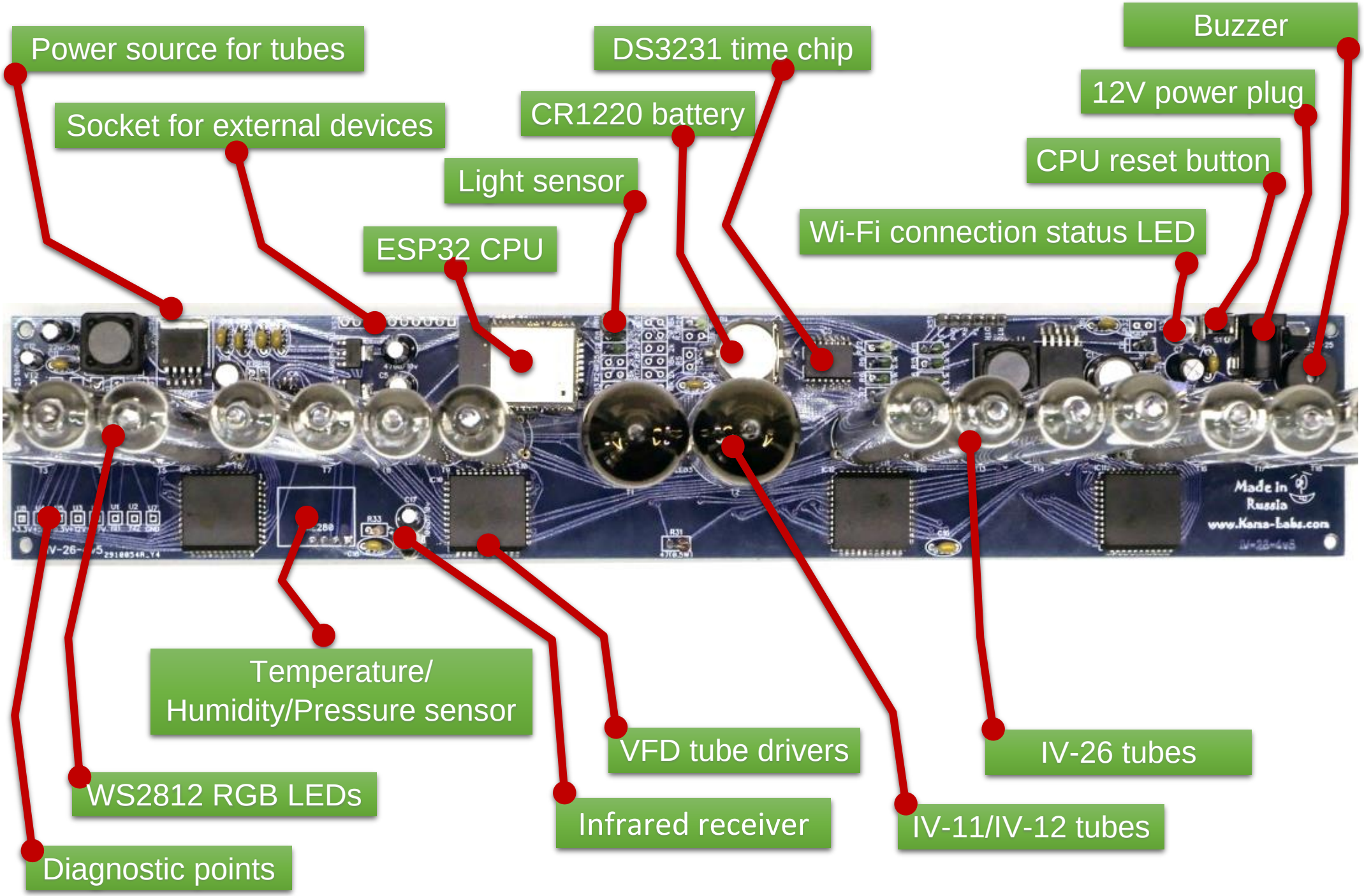
How to use remote control:

Button	Action
OK	Show message
◄ ►	Change animation of digits
▲ ▼	Change brightness of tubes
1	
2	Show alarm
3	
4	Show temperature -> humidity -> pressure
5	Show date
6	On/off alarm
7	Brightness of bottom LEDs
8	Turn off LEDs and tubes (clock still works)
9	Brightness of top LEDs
0	Wi-Fi status
*	Change color of top LEDs
#	Change brightness of top LEDs
9 + 1	Set Wi-Fi mode as internet connection
9 + 2	Set Wi-Fi mode as Access point
9 + 3	Reset all settings
9 + 5	Tube test mode

Look at backside of clock and there you will see orange LED. It show Wi-Fi status of clock:

- LED not glow – the clock connected to you home Wi-Fi network;
- LED blink fast – the clock try connect to you home Wi-Fi network;
- LED blink slow – the clock in Access Point mode.


Power source for tubes
Socket for external devices
ESP32 CPU
Light sensor
CR1220 battery
DS3231 time chip
Buzzer
12V power plug
CPU reset button
Wi-Fi connection status LED
Temperature/
Humidity/Pressure sensor
WS2812 RGB LEDs
Diagnostic points
Infrared receiver
VFD tube drivers
IV-11/IV-12 tubes
IV-26 tubes
Made in
Russia
www.Nixie-Labs.com